

NATIONAL ADVISORY COMMITTEE  
FOR AERONAUTICS

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M.L. 285 (Monthly list of documents released by the NACA during December 1950)

Libraries in most of the important cities throughout the country, as well as libraries of schools, manufacturers, and other organizations dealing with aeronautics, are supplied copies of these publications for references.

TECHNICAL NOTES

- TN 2217 Analysis of Plane-Stress Problems with Axial Symmetry in Strain-Hardening Range.  
By: M. H. Lee Wu.
- TN 2223 Investigation of the Flow through a Single-Stage Two-Dimensional Nozzle in the Langley 11-Inch Hypersonic Tunnel.  
By: Charles H. McLellan, Thomas W. Williams, and Ivan E. Beckwith.
- TN 2225 Bending and Buckling of Rectangular Sandwich Plates.  
By: N. J. Hoff.
- TN 2226 Theoretical Analysis of Oscillations in Hovering of Helicopter Blades with Inclined and Offset Flapping and Lagging Hinge Axes.  
By: M. Morduchow and F. G. Hinchey.
- TN 2227 Relation between Inflammables and Ignition Sources in Aircraft Environments.  
By: Wilfred E. Scull.
- TN 2228 Effects of Modifications to the Leading-Edge Region on the Stalling Characteristics of the NACA 63<sub>1</sub>-012 Airfoil Section.  
By: John A. Kelly.
- TN 2229 The Effect of End Plates on Swept Wings at Low Speed.  
By: John M. Riebe and James M. Watson.
- TN 2230 Synthesis and Purification of Alkyldiphenylmethane Hydrocarbons.  
I - 2-Methyldiphenylmethane, 3-Methyldiphenylmethane  
2-Ethyldiphenylmethane, 4-Ethyldiphenylmethane and  
4-Isopropyldiphenylmethane.  
By: John H. Lamneck, Jr., and Paul H. Wise.
- TN 2231 Comparison of Fatigue Strengths of Bare and Alclad 24S-T3 Aluminum-Alloy Sheet Specimens Tested at 12 and 1000 Cycles Per Minute.  
By: Frank C. Smith, William C. Brueggeman, and Richard H. Harwell.
- TN 2234 Statistical Explanation of Spontaneous Freezing of Water Droplets.  
By: Joseph Levine.

- TN 2235     The Boundary-Layer and Stalling Characteristics of the NACA 64A010 Airfoil Section.  
By: Robert F. Peterson.
- TN 2236     Supersonic Flow around Circular Cones at Angles of Attack.  
By: Antonio Ferri.
- TN 2237     Correlations of Heat-Transfer Data and of Friction Data for Interrupted Plane Fins Staggered in Successive Rows.  
By: S. V. Manson.
- TN 2239     Theoretical Investigation of Transonic Similarity for Bodies of Revolution.  
By: W. Perl and Milton M. Klein.
- TN 2240     The Effect of Nonuniform Temperature Distributions on the Stresses and Distortions of Stiffened-Shell Structures.  
By: Richard R. Heldenfels.
- TN 2241     A Numerical Method for the Stress Analysis of Stiffened-Shell Structures under Nonuniform Temperature Distributions.  
By: Richard R. Heldenfels.
- TN 2242     Analytical Investigation of Turbulent Flow in Smooth Tubes with Heat Transfer with Variable Fluid Properties for Prandtl Number of 1.  
By: Robert G. Deissler.
- TN 2243     Effect of Cell Shape on Compressive Strength of Hexagonal Honeycomb Structures.  
By: L. A. Ringelstetter, A. W. Voss, and C. B. Norris.
- TN 2244     A Comparison of Theory and Experiment for High-Speed Free-Molecule Flow.  
By: Jackson R. Stalder, Glen Goodwin, and Marcus O. Creager.
- TN 2247     A Comparison of the Lateral Controllability with Flap and Plug Ailerons on a Sweptback-Wing Model Having Full-Span Flaps.  
By: Powell M. Lovell, Jr.
- TN 2248     Analysis of the Effects of Design Pressure Ratio per Stage and Off-Design Efficiency on the Operating Range of Multistage Axial-Flow Compressors.  
By: Melvyn Savage and Willard R. Westphal.
- TN 2249     The Spanwise Distribution of Lift for Minimum Induced Drag of Wings Having a Given Lift and a Given Bending Moment.  
By: Robert T. Jones.
- TN 2250     An Analysis of the Applicability of the Hypersonic Similarity Law to the Study of Flow about Bodies of Revolution at Zero Angle of Attack.  
By: Dorris M. Ehret, Vernon J. Rossow, and Victor I. Stevens.

- TN 2251 Effects of Mach Number Up to 0.34 and Reynolds Number Up to  $8 \times 10^6$  on the Maximum Lift Coefficient of a Wing of NACA 66-Series Airfoil Sections.  
By: G. Chester Furlong and James E. Fitzpatrick.
- TN 2252 Formulas for Source, Doublet, and Vortex Distributions in Supersonic Wing Theory.  
By: Harvard Lomax, Max. A. Heaslet, and Franklyn B. Fuller.
- TN 2253 On a Source-Sink Method for the Solution of the Prandtl-Busemann Iteration Equations in Two-Dimensional Compressible Flow.  
By: Keith C. Harder and E. B. Klunker.
- TN 2256 Three-Dimensional, Unsteady-Lift Problems in High-Speed Flight - Basic Concepts.  
By: Harvard Lomax, Max. A. Heaslet, and Franklyn B. Fuller.

## REPORTS

- Rept. 941 Prediction of the Effects of Propeller Operation on the Static Longitudinal Stability of Single-Engine Tractor Monoplanes with Flaps Retracted.  
By: Joseph Weil and William C. Sleeman, Jr.  
Formerly issued as TN 1722.
- Rept. 950 Investigation of a Systematic Group of NACA 1-Series Cowlings with and without Spinners.  
By: Mark R. Nichols and Arvid L. Keith, Jr.  
Formerly issued as RM L8A15.
- Rept. 955 Application of Radial-Equilibrium Condition to Axial-Flow Compressor and Turbine Design.  
By: Chung-Hua Wu and Lincoln Wolfenstein.  
Formerly issued as TN 1795.
- Rept. 958 Laminar Mixing of a Compressible Fluid.  
By: Dean R. Chapman.  
Formerly issued as TN 1800.
- Rept. 959 One-Dimensional Flows of an Imperfect Diatomic Gas.  
By: A. J. Eggers, Jr.  
Formerly issued as TN 1861.
- Rept. 963 Investigation with an Interferometer of the Turbulent Mixing of a Free Supersonic Jet.  
By: Paul B. Gooderum, George P. Wood, and Maurice J. Brevoort.  
Formerly issued as TN 1857.
- Rept. 980 General Algebraic Method Applied to Control Analysis of Complex Engine Types.  
By: Aaron S. Boksenbom and Richard Hood.  
Formerly issued as TN 1908.

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REPORTS

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- Rept. 981      Theoretical Analysis of Various Thrust-Augmentation Cycles for Turbojet Engines.  
By: Bruce T. Lundin.  
Formerly issued as TN 2083.

TECHNICAL MEMORANDUMS

- TM 1288      The Diffusion of a Hot Air Jet in Air in Motion.  
By: W. Szablewski.
- TM 1289      The Development of a Hollow Blade for Exhaust Gas Turbines.  
By: H. Kohlmann.
- TM 1292      Laws of Flow in Rough Pipes.  
By: J. Nikuradse.